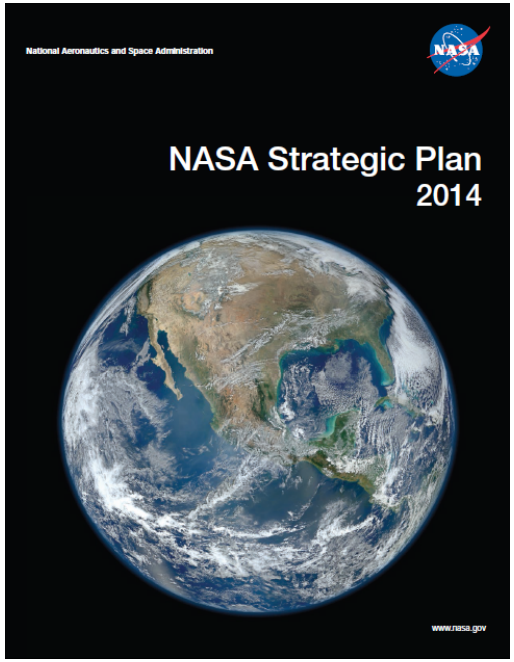
Business Service Assessment (BSA)

Briefing to NAC Institutional Committee

November 2014

Business Services Assessment Purpose

IMPERATIVE: Establish a more efficient operating model that maintains a minimum set of capabilities AND meets current and future mission needs.



From the Agency's Strategic Plan:

Strategic Goal 3

Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

"... As part of this pursuit, we must ensure that our facilities, resources, and plans are sustainable. This means exploring new ways of doing business. We will advance our efficiency and sustainability through wise investments and innovative approaches to resource management, including divesting ourselves of infrastructure no longer needed, so that we can achieve our core mission within our budget"

Completing the Puzzle

NEW AGENCY OPERATING MODEL

We are addressing this piece

3

BSA Approach

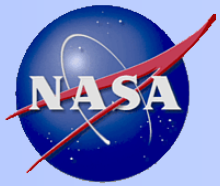
- Designed to leverage the experience gained from TCAT methodology and tailor it for the operating model of agency business services, while preserving a commitment to ***transparency and stakeholder input*** to inform decisions throughout all phases of the process.
- The ***BSA core teams*** will define and provide observations on the state of the business service, both in terms of resources as well as the health of the capability as compared to internal and external requirements. Core teams will be established for each individual assessment.
- The ***Business Services Steering Committee (BSSC)*** will use this information to develop options, solicit stakeholder input, and present recommendations to the Mission Support Council (MSC). The BSSC will remain in place across all of the BSA efforts. ***BSSC Members:*** *Pam Hanes, Roy Maizel, Sherri Mcgee, Melanie Saunders, Jeff Seaton, Krista Paquin,Chair.*
- Given the external drivers and complex interdependencies of mission support work performed at the centers, the BSSC will incorporate ***risk-informed recommendations*** to ensure that decisions between alternatives are made with an awareness of the risks associated with each.
- Concurrent with the pilot, the BSSC will be working with the Center Associate Directors and Agency Functional leaders to ***identify additional assessment areas*** to be accomplished after completion of the pilot.

Business Services Assessment Terminology

Term	Definition
Asset	Any item of economic value owned by NASA, including facilities and equipment and excluding personnel. May include other enabling assets, such as bandwidth capacity, dedicated airspace, or environmental permit capacity.
Competency	A personnel skill or ability.
Equipment	Articles or physical resources serving to assist a person in conducting an operation or activity other than real property.
Facility/Real Property	Land, buildings, labs within buildings, structures, and other real property improvements including utility systems, and leasehold improvements. For this study we will use the term “facility”.
Mission	A major activity required to accomplish an Agency goal or to effectively pursue a scientific, technological, or engineering opportunity directly related to an Agency goal. For this task, this term will be used exclusively in reference to a Mission Directorate.
Portfolio	A collection of programs/projects or activities managed as a logical grouping to balance risk and performance (e.g. robotic exploration of Mars).
Solutions	The systems, subsystems and activities that result from the decomposition of Agency objectives. Solutions refer to current and future portfolio content and are budget and organizationally neutral.
Business Services Capability	All of the assets and workforce (FTE/WYE) meeting a specific business service need.
Business Services Capacity	The available amount of specific business services capability.
Business Services HQ Functional Leader	Provide leadership for assuring the quality and efficiency of all business services and achieving consistency of approach, where appropriate, of the business services activity across the agency. Develops and implements plans, strategies for divestment/investment, policies, practices and standards to meet future mission needs.

Ground Rules for Business Services Assessment Decisions

1. If there is *no NASA defined current or future need* or mandate/directive for a business service, consider divestment and/or reinvestment of resources.
2. If there is sufficient capability external to NASA and the service is *not inherently governmental*, consider divestment and external sourcing.
3. If there is *unnecessary duplication or excess capacity* for a business service across centers, consider divesting, reducing, standardizing and/or resizing the activities for centers participating in this business service.
4. *Agency approach* will be applied even when a business service capability is funded and managed predominantly by one Mission Directorate or Center.
5. If a business services capability is predominantly WYE, consider whether it should be resident within NASA or if the acquisition model should change, which would include a consideration of *strategic insourcing and outsourcing*.
6. While dispositioning a business service capability decision, it may be necessary to *consider new, modify, or request a waiver from existing policy*.
7. If there is a *gap or a new emerging business service capability* that is deemed core to the current or future mission, the Agency will apply savings from divestments to these strategic solution/capability areas where possible.



IT PILOT

Why IT? The Future State of NASA's Information Technology

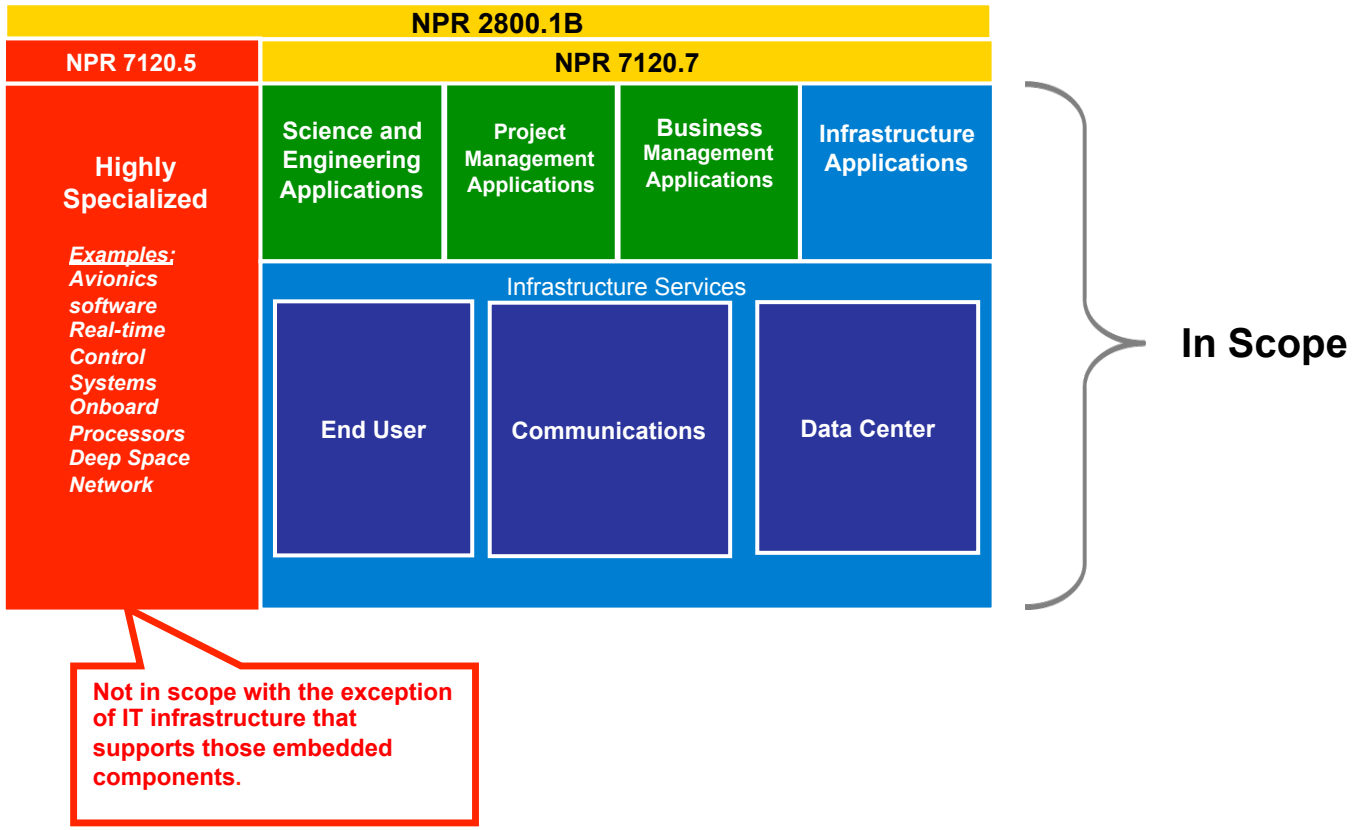
- Challenges – "The Burning Platform"
  - In FY13, we spent $1.4B of NASA's $17B budget on IT, 8% of the total budget, yet Centers report IT is understaffed and underfunded to meet requirements.
  - Having different infrastructures, applications and processes across Centers and Mission Directorates creates funding and labor redundancies among common business processes and fosters shadow IT organizations across NASA.
  - We are missing strategic sourcing opportunities for volume discounts and lowering maintenance and training costs.
  - Decentralized and divergent architectures hinder the ability to appropriately secure information and systems, effectively implement disaster recovery strategies, and creates counterproductive redundancies.
  - Limited funding to address obsolescence and invest in technology advancements such as virtualization and cloud computing, which pave the way to better utilization of resources.
- Desired State
  - NASA IT is managed to maximize enterprise capabilities, and enable improved security, integration and collaboration across the Agency.
  - OCIO provides secure, affordable, speedier, mission-enabling IT solutions that fit within our current and future budget environments; efficient and effective use of available IT resources.
  - OCIO is responsive to unique requirements, leveraging purchase power and streamlining decision making.
  - Programs will continue to manage highly specialized, mission embedded systems and OCIO will influence security and architecture policies for these systems.
- Benefits
  - Streamlined (one-NASA) suite of applications and systems and thus a smaller, more understood, controlled and defensible security perimeter.
  - Realized cost savings provide additional resources that can be redirected to meet Agency needs.
  - Optimize the use of standardized IT solutions that meet Agency needs, improve IT security posture, eliminate redundancies, and better meet external stakeholder mandates.
  - Meets external requirements, e.g. Clinger-Cohen legislation, NASA's OIG audit of IT Governance,(IG-13-015) recent OMB guidance (M-11-29 for CIO authorities), Federal IT Acquisition Reform Act (FITARA), Federal Information Security Management Act (FISMA).

IT Pilot Assessment Decision Criteria

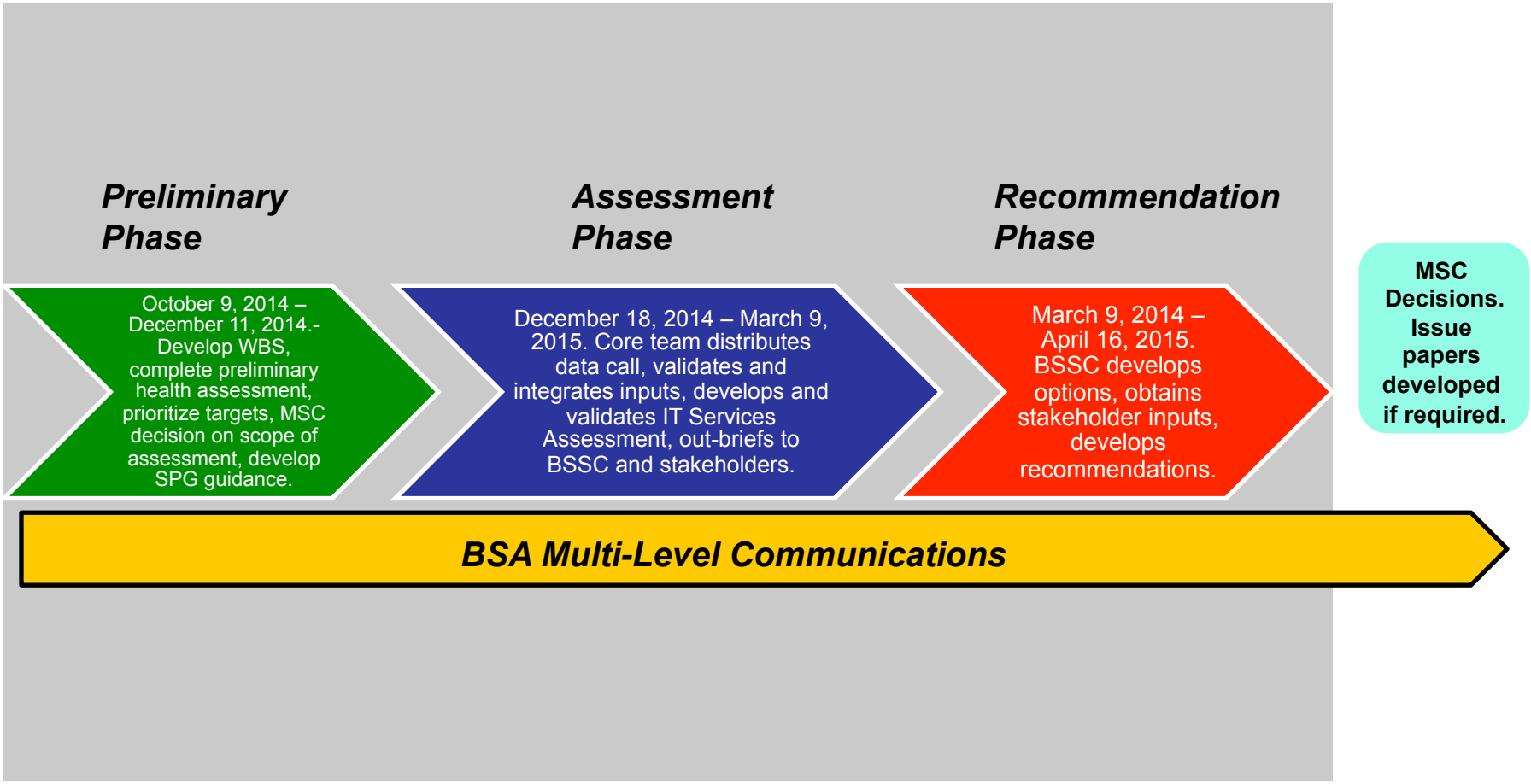
- NASA IT is managed to maximize enterprise capabilities, and enable improved security, integration and collaboration across the Agency.
- Balance of optimizing locally and globally.
- Maintenance of IT services to the extent and at the location(s) determined by the decision will result in:
  - IT services functioning as designed to optimally meet current and future missions.
  - Clear understanding of IT services deployment for mission support
  - Efficient and innovative monitoring (including interim performance criteria)
  - Managing and understanding of IT Services in relation to other capabilities within the portfolio and evolving IT requirements.
  - Secure, affordable, speedier, mission-enabling IT solutions that fit within our current and future budget environments
  - Responsive to unique requirements, leveraging purchase power and streamlining decision making.
  - Programs will continue to manage highly specialized, mission embedded systems and OCIO will influence security and architecture policies for these systems.
- Does not introduce unacceptable risk to the programs
- Decisions are transparent and communicated internally and externally.
- Where savings can be recouped, reinvestment strategies will seek to cover Agency funding shortfalls and/or strengthen IT services.

Scope of IT Pilot Assessment

NASA's IT environment is organized into three major areas: IT infrastructure services, IT applications, and "Highly Specialized" IT, such as the technology that supports real-time control systems and onboard avionics.



IT Pilot Assessment Process



Key Questions to Address

Key Issues to Address as Required per Decision	Supporting Facts as Required per Decision
• Where does the business services capability exist today? • How does the existing business services capability match capacity requirements? • What is the condition of the existing business services capability (poor, satisfactory, good, state of the art)? • How do current service levels compare to Baseline Service Level objectives and external benchmarks? • Are there gaps in current Agency enterprise service offerings that the centers must fill?	• BSA assessment based on FTE and WYE levels by Center; physical infrastructure data; observations on requirements and deployment, to include business services performed within programs. • Provide any BSA observations on capacity/throughput from Center input. • Independent review initiated by BSSC, as needed. • Updated Baseline Services Level data comparisons.
• What is the current funding by Agency, Center, or Program? • What contracts are in place for the provision of services? • What additional cost analysis helps to inform this decision?	• Current funding levels from OCIO, OCFO, Center and Mission Directorate input. • Contract values, scope and periods of performance. • Additional cost analysis initiated by BSSC, as needed.
• What are there external requirements (OMB circulars, legislative policy, external audits) that drive requirements? How are we performing against those?	• Provide current data on external mandates that the council will need to know about in order to make an informed decision.
• Does the business service exist in private industry or in other agencies? • Is there a federal preferred service provider?	• BSA assessment which includes information on private industry and other federal agencies. • Additional assessment initiated by BSSC on private industry/other agency options, as needed.
• Are there time critical issues related to this decision package?	• BSA assessment data. • Input to PPBE 2017.
• Are there *Intra-Center/Inter-Center/Cross Functional/External stakeholder* work package relationships and interdependencies? • Are there geographic dependencies of locally provided services? • What are the risks to the business service and programs under the current operating model?	• Provide additional data that the council will need to know about in order to make an informed, risk based decision regarding impact of changes to dependencies. • Provide data on potential risks under the current model.
Key Issues to Address for the Functional Area	**Supporting Facts as Required per Decision**
• What is the current management and operating model of IT across NASA (Agency and Centers)? Is the model effective? In its current state, does it achieve optimization of IT services across NASA? • Are the goals and objectives of NASA Strategic Plan and associated IT strategic plan fulfilled through the current state? • What is the strategic and leadership framework to ensure oversight, decision-making and transparency? Is the current IT Governance model effective for the current and future missions? Does the current IT Governance model provide for the optimization and decision authority level that allows for significant IT improvement IT services for NASA? • How is the IT business service ensuring effective integration of IT across NASA? • Are the IT services functioning as it is intended? Could the current model be considered the ideal target state?	• Provide current data on strategic goals and priorities, governing structures, leadership and strategic frameworks, etc. that the council will need to know about in order to make an informed decision. • Provide current data on how the target state of the business model and how the current state compares. • Provide current data on strategic and leadership framework to show how decisions are made.

References to Provide Supporting Data

Reference	Value for Assessment/Key questions to address
NPR 2800.1B – Managing Information Technology	As an indicator of health, how closely do we comply with Agency Requirements? See chart 19.
Baseline Service Levels (BSL)	WBS framework – See chart 20
Applicable OIG and GAO Audit Reports	Provides assessment of health and recommendations
Laws, Regulations, Directives	Provides requirements that inform/constrain the assessment and recommendations
Previous assessments (PA&E, OMB, etc.)	Indicators of health
Benchmarks of industry/government	Provides comparison data, alternatives for consideration
Questionnaires/Interviews	Provides perspective of the mission, customer, service providers, etc.
NASA Enterprise Architecture Artifacts	Provides current state, target state, and roadmaps
Current State Resource Information (Org charts, WYE/FTE)	Provides current state, analysis data, input for alternatives consideration
Financial Data (300s, 53s, SIBCs, budget data)	Provides current state, analysis data, input for alternatives consideration

Core Team Assessment Components

Framework : Utilize L1 / L2 Baseline Service Levels (BSL) WBS structure plus additional IT activities required for a comprehensive assessment
- Data Management

The Major IT Activities (Level 1)

- 1.0 Communications Services
- 2.0 End-User Services
- 3.0 Data Center Services
- 4.0 Business Management Applications
- 5.0 Science and Engineering Applications
- 6.0 Project Management Applications
- 7.0 Infrastructure Applications
- 8.0 IT Security
- 9.0 Management and Operations
- 10.0 Enterprise Architecture

Each Major Activity is broken down to a lower level of sub-activities as shown in this *EXAMPLE*

Communications Services (1.0) Sub Activity (Level 2)

- 1.1. Sub-activity: Wide Area Network Services (Wan)
- 1.2. Sub-activity: Local Area Network Services: Center Lan
- 1.3. Sub-activity: Local Area Network Services: Wireless (Wlan)
- 1.4. Sub-activity: Local Area Network Services: Remote Access
- 1.5. Sub-activity: Cable Plant
- 1.6. Sub-activity: Voice Services
- 1.7. Sub-activity: Video Infrastructure Services